A study on the water environment of around Mt.Asama and Mt.Kusatsu-Shirane

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1. Introduction

Both Mt. Asama and Mt.Kusatsu-Shirane are based on Neogene volcanic rocks, and the water quality unique to the volcanic region appears in the river water. We will try to examine the factors of water environment formation by clarifying the geological structure and land use for each surrounding area.

2. Research method

In Mt.Asama 26 times from June 2015 to April 2018, at Mt.Kusatsu-Shirane, we conducted 11 field surveys and sampling from May 2017 to April 2018. It is about 80 rivers and 12 precipitation. On-site measurement of AT, WT, pH, RpH, EC was carried out. We also sampled the water and brought it back to the laboratory and analyzed the TOC and the major dissolved components (Na^+, K^+, Ca^{2+}, Mg^{2+}, Cl^-, NO_3^-, SO_4^{2-}) after taking the filtration.

3. Results and discussion

3.1. Mt. Asama

On the south side, dissolved matter is very close to each other in the lower river basin and the upper stream area of the Yugawa and show different characteristics from the water quality upstream of the river. It is suggested that the groundwater influenced by volcanic gases (Suzuki et al. 2007) flowing into the river at the valley head of the summit area and the cliff line of the plateau at both points both in active forest volcanoes It was.

3.2. Mt.Kusatsu-Shirane

Several strongly acidic and high EC river waters, which are thought to have been influenced by the former sulfur mine wastewater, were found in the branch of the Manza River in the western part of the mountainous area, and in the Takinosawa, Akagawa and Osozawa rivers located in the center of the survey area, pH:4.0-7.0, EC:200-600 μS/cm, with volcanism, mines and mining drainage, influences from the surrounding upland fields are also conceivable.

キーワード：浅間山、草津白根山、火山、噴火、水環境
Keywords: Mt.Asama, Mt.Kusatsu-Shirane, Volcano, Eruption, Water environment

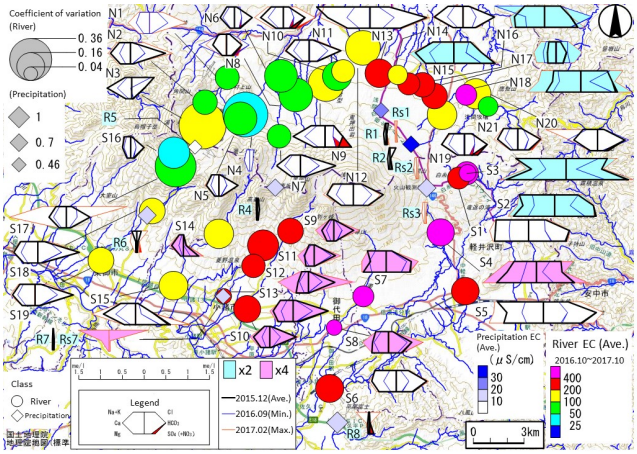

Fig.1 Distribution of water quality (Mt.Asama)

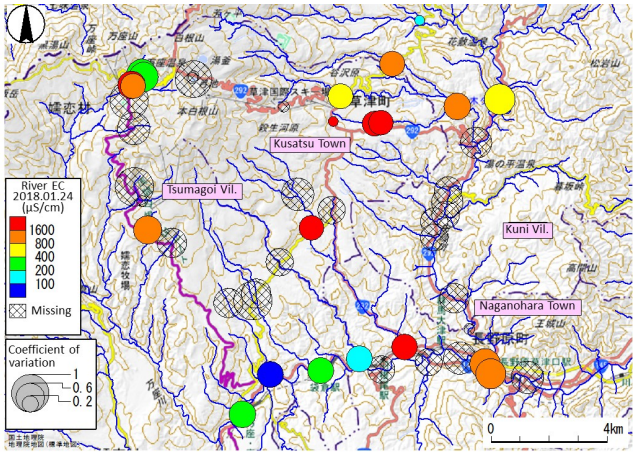

Fig.2 Distribution of EC (Mt.Kusatsu-Shirane)

